

VTT Technical Research Centre of Finland

## Practices and International Prospects in Textile Circulation

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**Practices and International Prospects in Textile Circulation**

**Senior Scientist Pirjo Heikkilä VTT**

**Specializing in bio- and circular economy in the Baltic Sea Region – seminar, 26.3.2019 Tampere**

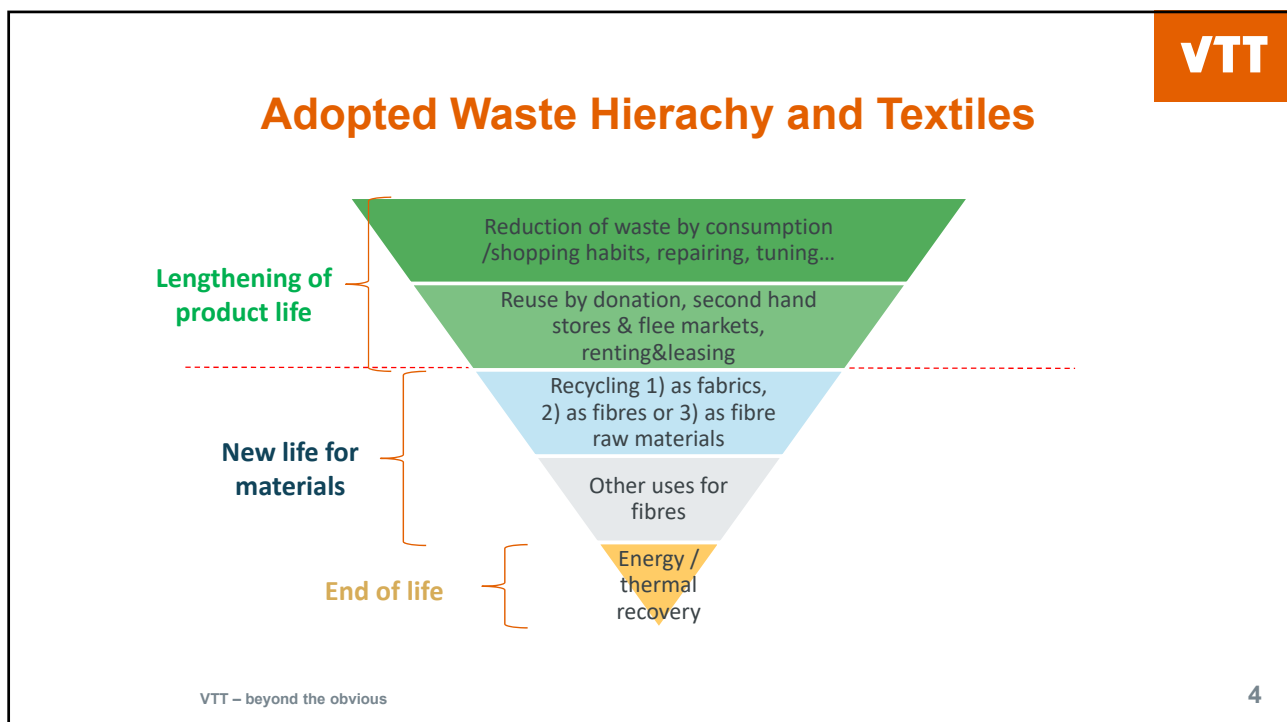
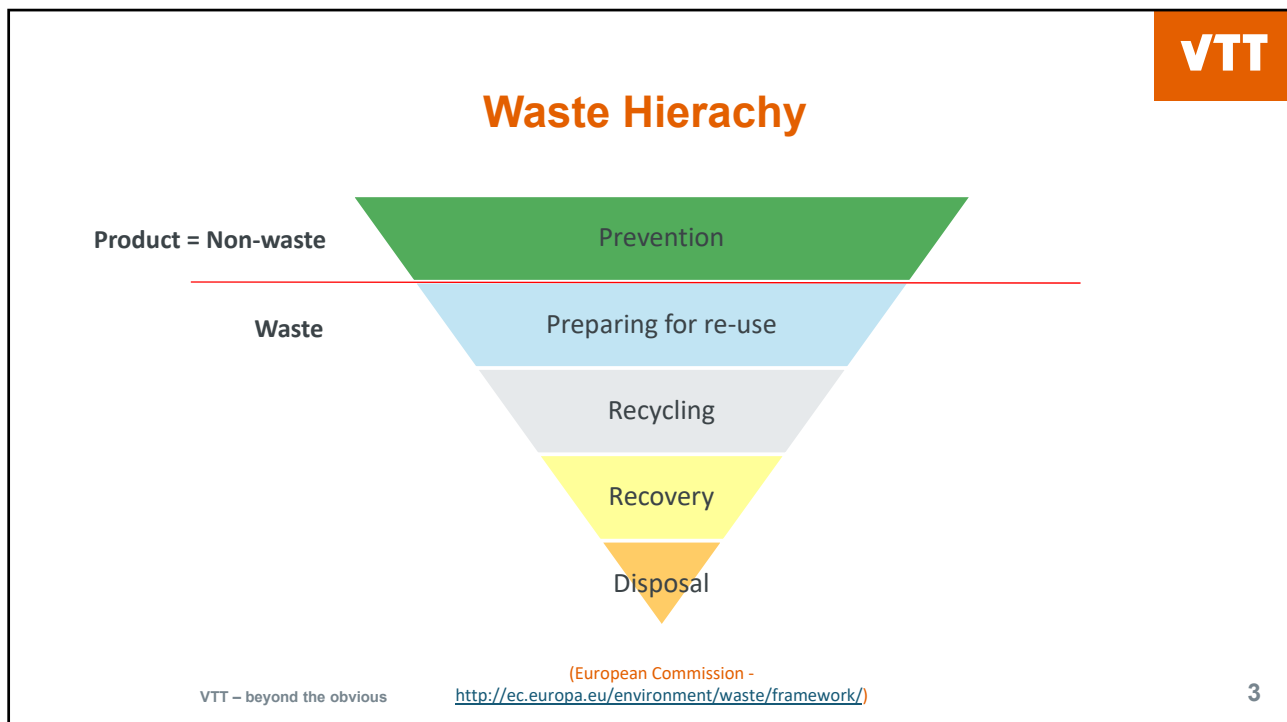
26.3.2019 VTT – beyond the obvious 1

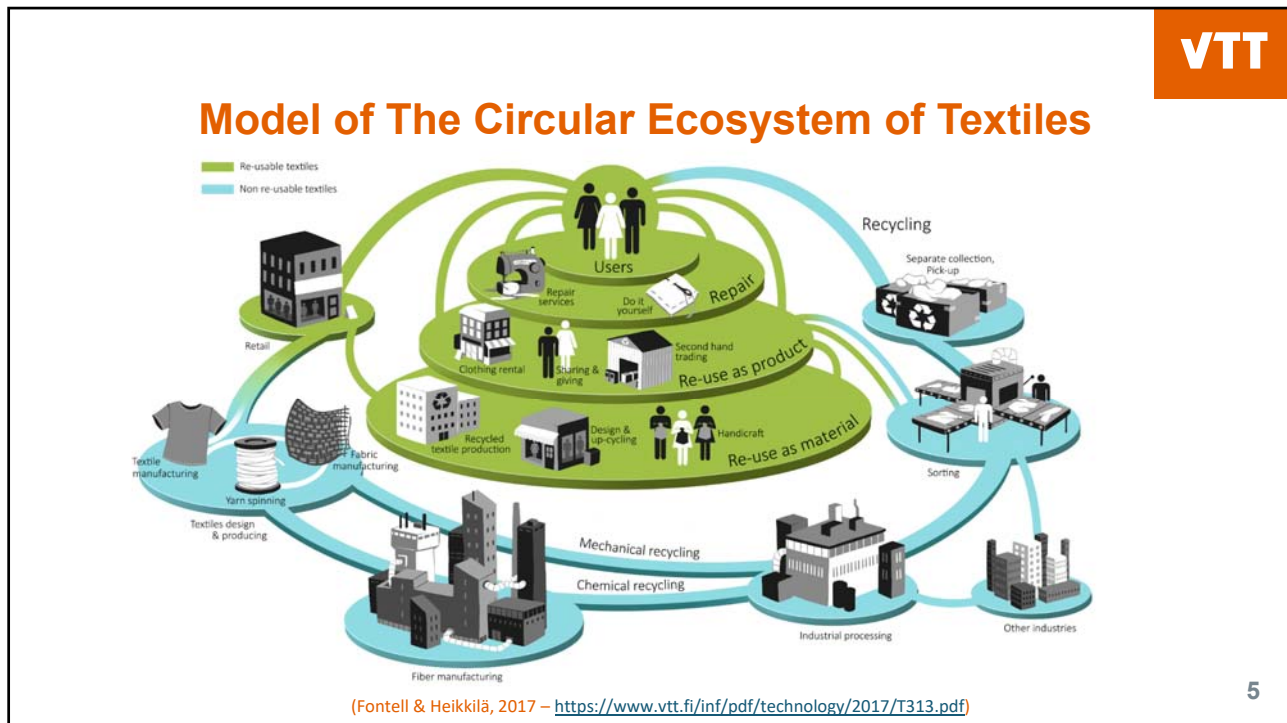


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**Target of circular economy:  
Maintain the value of products and materials as high as possible for the maximum of time with the minimum environmental impact.**

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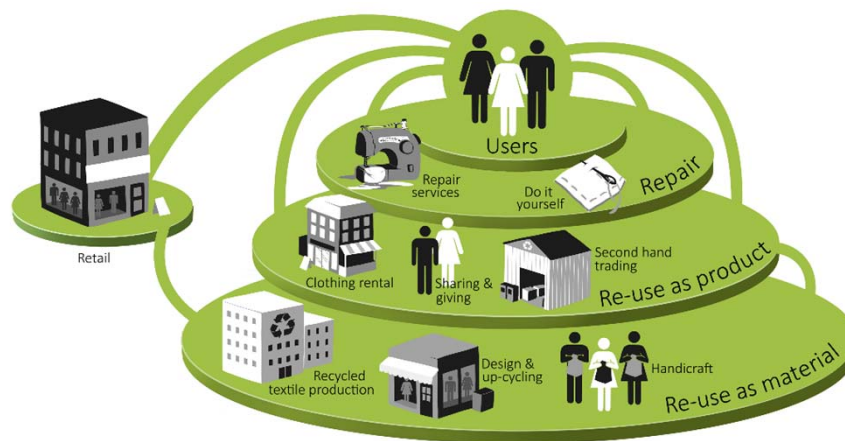
# What we have?

# What is still missing?

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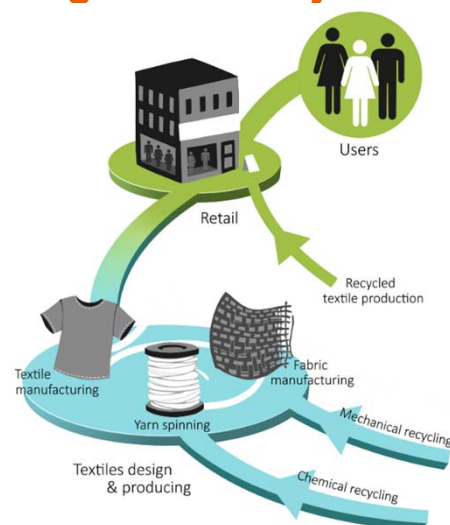
## Existing – expected be increase in CE



(Fontell & Heikkilä, 2017 – <https://www.vtt.fi/inf/pdf/technology/2017/T313.pdf>)

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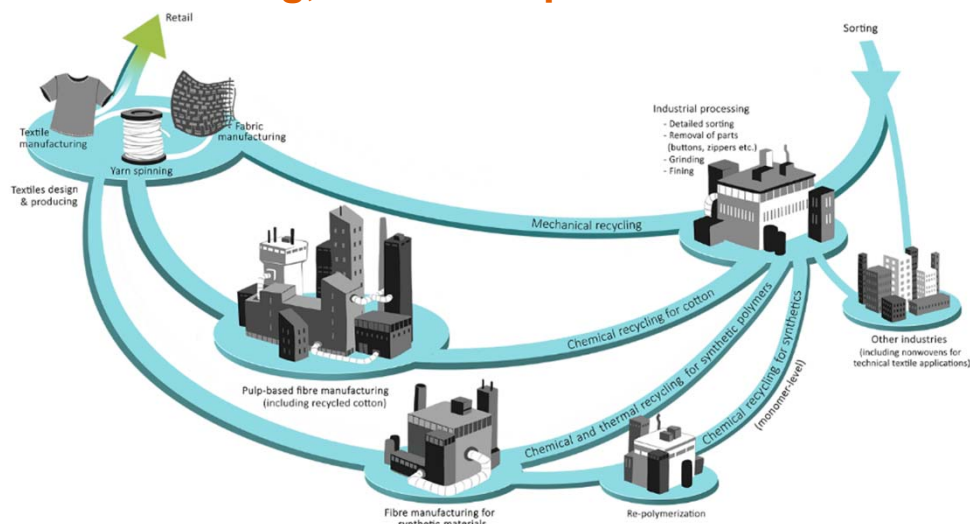
## Existing – some adjustments in CE



(Fontell & Heikkilä, 2017 – <https://www.vtt.fi/inf/pdf/technology/2017/T313.pdf>)

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## Some existing, but development needed for CE



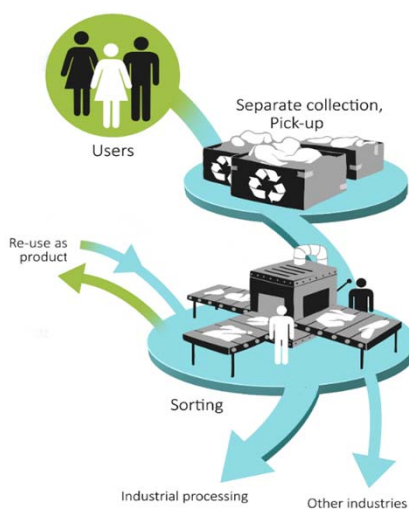
(Fontell & Heikkilä, 2017 – <https://www.vtt.fi/inf/pdf/technology/2017/T313.pdf>)

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## Needs to be build for CE

### EU level decisions:

- Separate collection of textile waste by 2025
- Recycling targets not stated yet

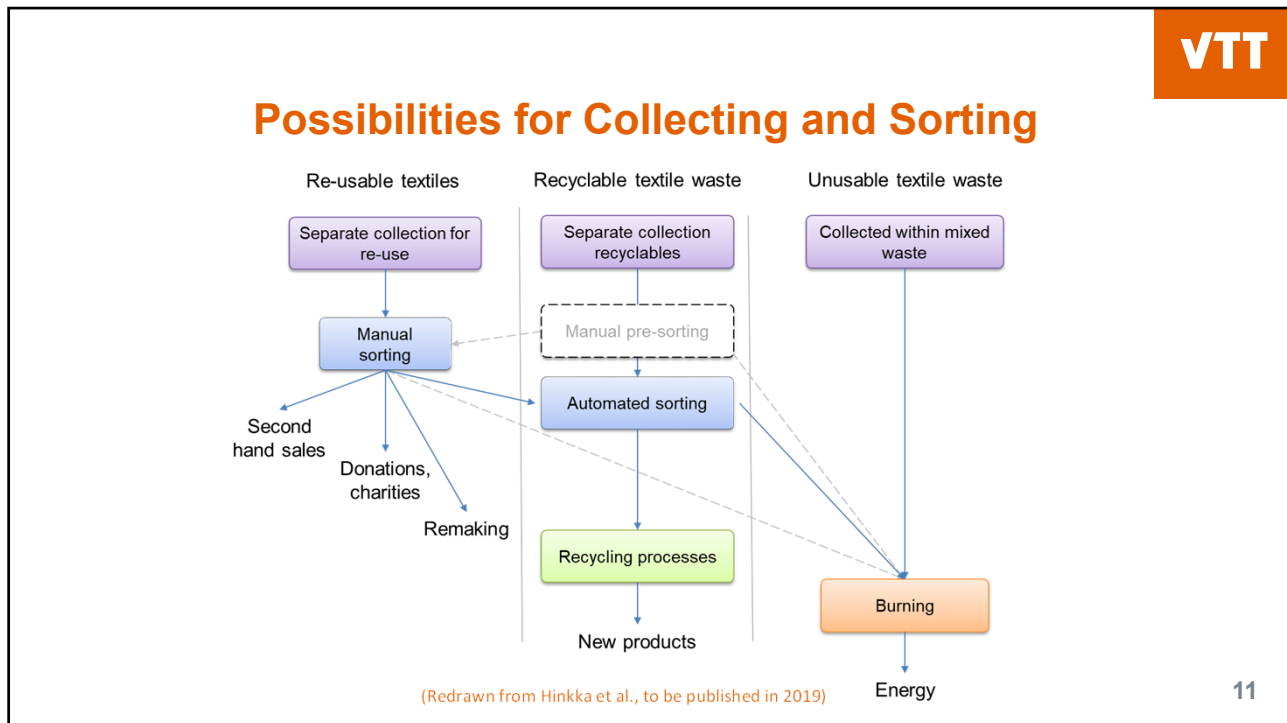


### National level:

- EU countries can decide & determine how this should be organized
- Legislation expected in 2020

(Fontell & Heikkilä, 2017 – <https://www.vtt.fi/inf/pdf/technology/2017/T313.pdf>)

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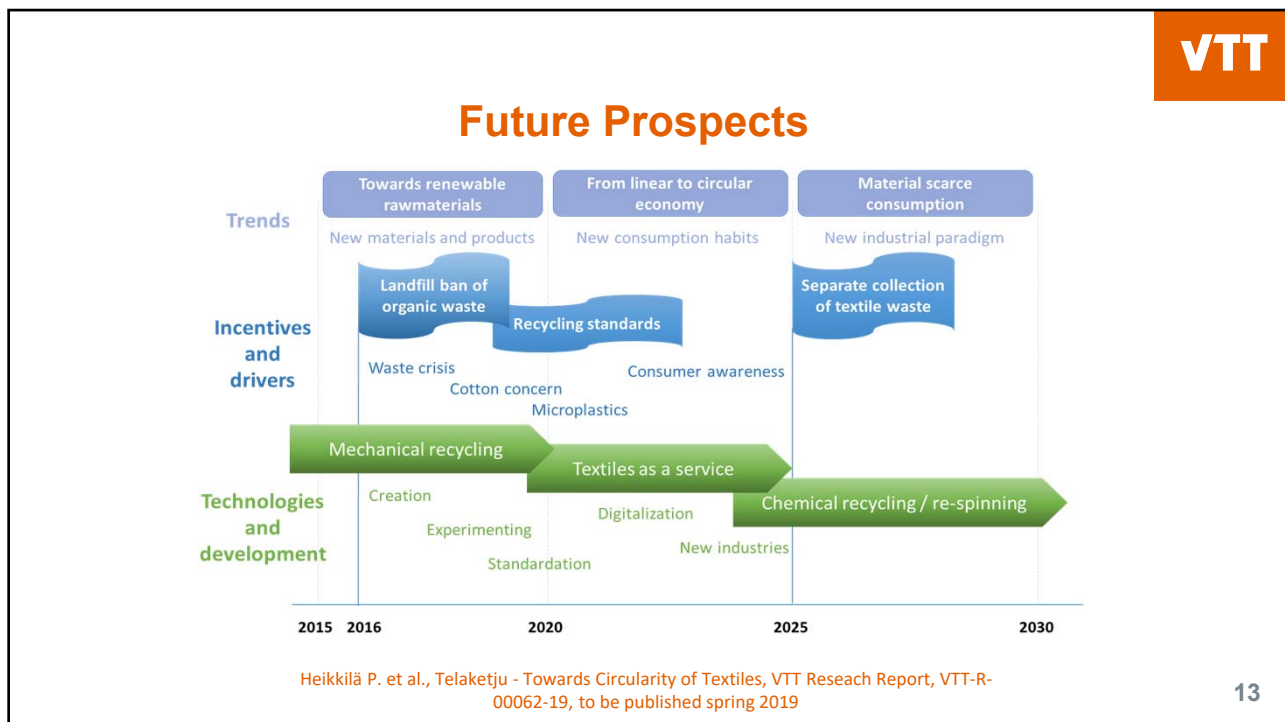


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# Ecosystem & International Prospects

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## International Aspects

- Recycling, also closed loops, is done by forerunners
- However...there is no extensive operational circular (eco)systems in the World, **yet**
- Therefore, there are similar needs in all countries
  - New business models, especially related to services and ownership of textiles
  - New value chains, also across different sectors
  - New partnerships
  - New innovations and development of technologies
  - Investments
  - Adjustments to regulation, incentives for developing circular solutions

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## International Aspects

- Strength of different countries are different and value chains can expect to cross borders
  - Complementing value chains and industries e.g. Nordic-Baltic co-operation
  - Ensuring sufficient raw material base for certain recycling processes may need collecting of certain textile waste fraction from several countries
- New ecosystem(s) needed

## Telaketju - Ecosystem Building



Ympäristöministeriö  
Miljöministeriet  
Ministry of the Environment

Topics: Collecting, sorting and pre-processing  
Participants: Municipal waste management and recycling organizations, public participants, as well as charities



Ministry of Economic Affairs  
and Employment of Finland



Varsinais-Suomen liitto  
Egentliga Finlands förbund  
Regional Council of Southwest Finland

Topics: Investments and markets & business planning

Beneficiary: Municipal waste management organization in Southwest Finland

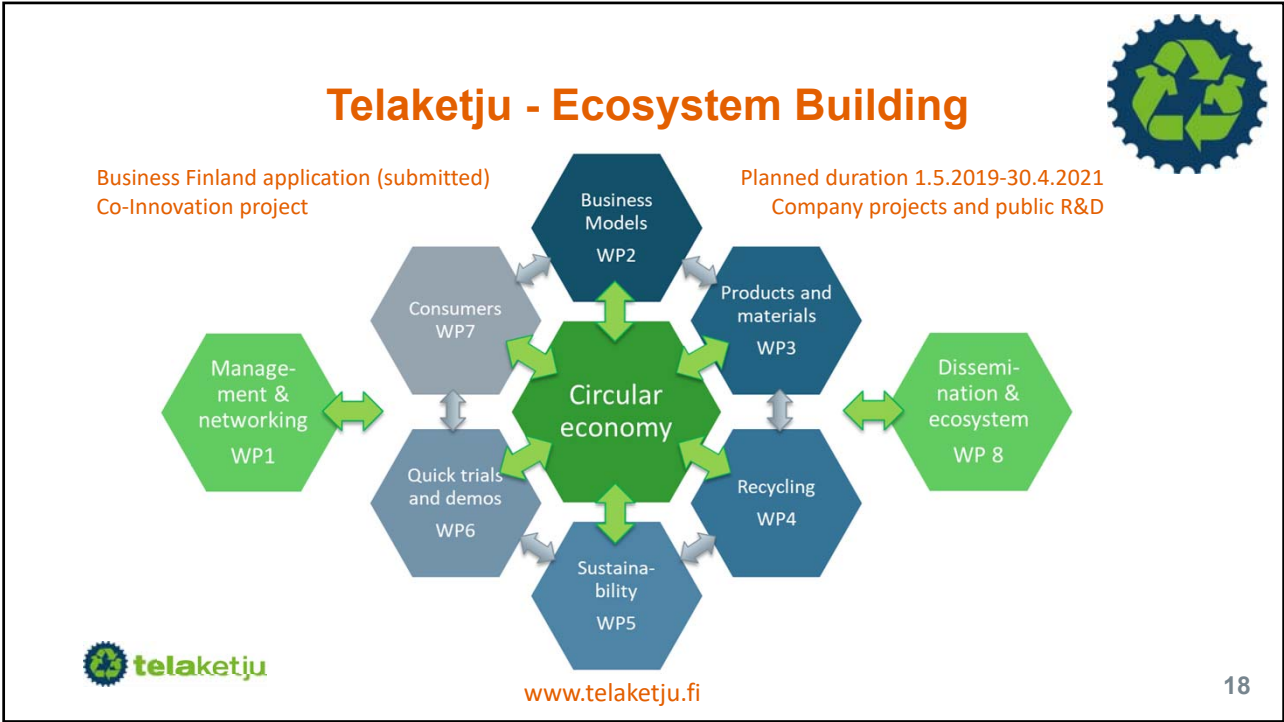
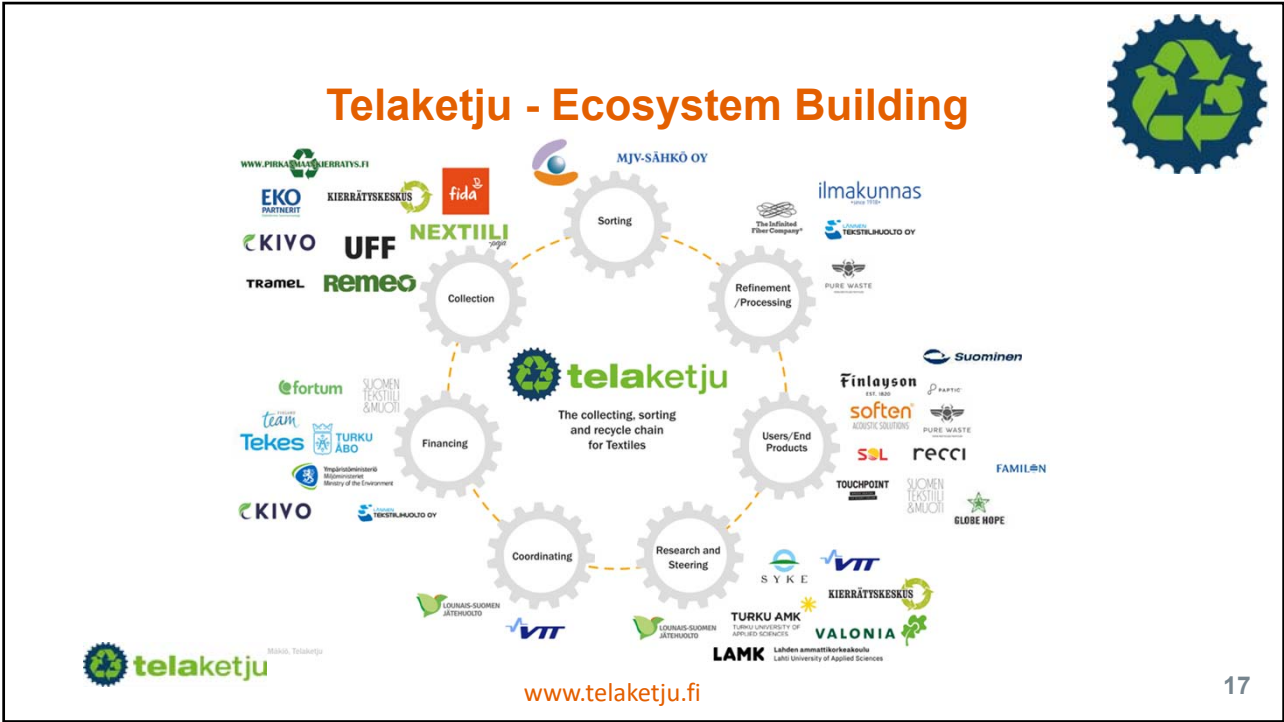
Tekes


BUSINESS  
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Topics: R&D for processes, products, services  
Participants: Companies, Research Institutes, Academia



[www.telaketju.fi](http://www.telaketju.fi)






# In conclusion...

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## Conclusions

- Circular economy is coming – it includes strengthening of re-use cycles as well as recycling
- This changes business value models and value chain, but continues providing new business opportunities
- New kinds of networks and ecosystem required especially in recycling
- Linear textile model has been global – circular ecosystems may be somewhat more local, but remain still multinational

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## Acknowledgements

- Co-author in Modelling Report - Paula Fontell from Ethica
- My colleagues at VTT – Ali Harlin, Eetta Saarimäki, Taina Kamppuri, Marja Pitkänen, Kaisa Vehmas, Marjo Määttänen, and many others
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- Project consortium on Telaketju project
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# Thank you for your attention!

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